THE JOURNAL OF SCHOOL HEALTH

Vol. VII SEPTEMBER, 1937 No. 7

CONTENTS

Health and Sanitary Practices in High School Athletics 151
C. O. Jackson.

Muscle Injuries 157
Clifton W. Henson, M.D.

The Operation of Swimming Pools and Bathing Beaches 159
New York State Department of Health.

The Medical Problem of First Aid 163
Robert H. Kennedy.

Constitution and By-Laws 167

Program of Annual Meeting 171

Editorials 173

Abstracts 176

Notes 178

Meetings 178

Published by
THE AMERICAN ASSOCIATION OF SCHOOL PHYSICIANS
883 Broadway, Albany, New York

Editorial Office, 3335 Main St., Buffalo, New York

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Entered as second-class matter at the Post-Office at Albany, N. Y.
January 26, 1937

Application for Transfer from Albany, N. Y., to Buffalo, N. Y., Pending

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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of School Physicians and the service rendered by them. Your participation by membership is solicited.

VOL. VII SEPTEMBER, 1937 No. 7

"HEALTH AND SANITARY PRACTICES IN HIGH SCHOOL ATHLETICS"*

C. O. JACKSON, *University of Illinois*

Purpose: The purpose of the study was to secure information relative to common practices in high school athletics pertaining to health, and an expression of opinion concerning certain practices there which might or might not be desirable.

Procedure: Questionnaires were sent to the principals of 736 accredited high schools in Illinois, with a request for their cooperation in returning the necessary information. The fact that five hundred and twenty-nine of them, representing 72% of the accredited schools, returned the questionnaires, and more than a hundred of the group made specific suggestions, indicates definite interest in the study.

Discussion: Schools returning questionnaires were grouped according to enrollment, as follows: I—up to 100; II—100-250; III—250-500; IV—500-1000; V—1000-2000, and VI—above 2000. The total responses vary from table to table, and within the tables, the sub-totals do not always equal the total. The answers to some of the questions do not lend themselves readily to presentation in table form, so in a number of cases, statements are made to summarize the trend and practice in the section on conclusions and recommendations.

Medical Examinations for Varsity Athletes

GROUP	SIZE OF SCHOOL	PER CENT REQUIRED
I	1 - 100	37
II	100 - 250	49
III	250 - 500	60
IV	500 - 1000	70
V	1000 - 2000	83
VI	2000 -	90

Two hundred seventy-two schools, or slightly more than half, required some form of medical examination before participation in Athletics, while 250 made this optional. Parent's permission for participation was required in the majority of cases.

Sixty-six Schools, or 13%, attempt to supplement the diet of their varsity athletes by protective or nutritive foods. Eight schools report that this is done in all sports but this is, of course, the exception.

A towel service for a small fee is the rule in certain schools but as the

*Summary of a Study: From the *Illinois School Athlete*, Vol. 9, No. 4, December, 1936; Vol. 9, No. 5, January-February, 1937, and Vol. 9, No. 6, March, 1937.

table indicates, only a small number, 23%, offer this even to the athletes.

The coach gives all first aid treatment to athletes in the great majority of schools.

Opinion of Principals Concerning Practices in Sanitation

		Permissible		Recommended
1.	Sliding wet towels across the floor to team	25	10%	2
2.	Players exchanging sweat clothing	94	18%	2
3.	Players exchanging practice jerseys	113	21%	1
4.	Players sharing a common water bottle	81	15%	2
5.	Players sharing a common towel or sponge	71	13%	2
6.	Players sharing a common orange or lemon	46	9%	2
7.	Players spitting on playing floor	4	.5%	3
8.	Players spitting behind wall paddings or in corners	7	1%	2

Three hundred and fifty-two, or 67% of the principals responding stated that all of the practices mentioned above were undesirable. These were divided as follows: Group I—75, II—128, III—70, IV—30, V—21, VI—28. Two principals felt that other items, such as sharing soap, and sharing socks, supporters, and shoes, were also undesirable from the standpoint of best practices in health and sanitation. While it does not appear possible that anyone particularly a schoolman, could conceivably recommend any of the above practices, nevertheless, as the table shows, this was true in a number of instances. It was apparent, however, that in at least two of these cases, an error had been made in the marking.

Epidemics Among Varsity Athletes

Group	Total	Boils	Colds	Sore Throat	Athlete's Foot
I	51	25	16	8	18
II	85	19	28	13	55
III	23	7	2	3	10
IV	10	4	2	2	5
V	13	1	3	0	1
TOTAL	182	56	51	26	89

One rather significant correlation is indicated in the above table. Though some schools who follow the best practices did have epidemics, in nearly every instance where the administrator indicated that the use of the common towel or the common drinking bottle were permissible, he also checked the fact that one or more epidemics had occurred on the team within the past two years!

I. *A condensed Summary of Suggestions for Overcoming Practices which had been indicated as undesirable by Principals (number in parenthesis indicates times mentioned)*

General

1. Coaches must be enlisted in a real health program (11).
2. Educate the community and the patrons to provide the necessary equipment; educate the players (6 each).
3. Closer cooperation between coaches and principals; health education for all students (3 each).
4. Make the results of this study available with a summary of recommenda-

tions for the guidance of athletic directors and administrators; I. H. S. A. A. might include these rulings in their handbooks and enforce them as carefully as the eligibility of the players (2 each).

5. The State Board of Health could possibly enforce new practices (1).

Specific

1. Assign suits (practice jerseys, playing suits, and sweat clothes) to players at beginning of season. Number them and permit no exchanging (12).
2. Provide sufficient equipment so exchanging is not necessary; provide places for expectorating (10 each).
3. Use individual half-pint, pint, pop bottles, or paper cups in a suitable container (9).
4. Have them go to the fountain when they want water; provide individual towels which are numbered; carry the towels to the boys (5 each).
5. Condition your boys to play without water except at the half; condition your boys not to spit indiscriminately (3 each).
6. Use plenty of good soap in the showers (2).
7. Weekly laundering of towels and uniforms; keep towels on the bench with sweat clothes; issue a clean towel daily; use foot baths to prevent athletes' foot; containers for paper napkins, for use in spitting and nose blowing to be discarded in receptacles; give boys plenty of gum and they won't need water (1 ea.).

II. *Ways of Overcoming These Practices, According to Some of the Physicians Who Cooperated in the Study Are:*

1. Rubber pans with chlorine for athletes' foot; mat covers for mats which are frequently washed; use sunlight frequently; daily washing of personal equipment; clean towels daily; paper cups for drinking; all practices mentioned in question 13 are undesirable. Dr. Britton.
2. Better lighting and ventilation; more drinking fountains and all of an approved oblique-jet type; more and better toilet facilities; better janitor service; sanitary precautions to prevent Impetigo Contagiosa, ringworm, scabies, and others. Dr. Beard.

III. *Opinions of Physicians Concerning Good Practices in Athletics.*

1. "Good practices in athletics consist of: Seasonal physical examinations; requiring certificates from physicians before participation after illness; taking no risk with the health of the participant; emphasizing the function of the coach as a builder of citizens and character, rather than a wizard in producing winning teams; proper care (cleanliness) of athletic outfits; and proper care of swimming pools. Dr. J. Howard Beard.
2. "Best practices . . . are: Required examination of all applicants for a sport; medical supervision of all injuries; and sanitation, including sanitation of buildings, clothing, participants, and much emphasis on teaching health. . . ." Dr. Harry A. Britton.
3. "Good practice is to require a medical examination before permitting

students to participate in competitive athletics. . . . Communicable diseases are most frequently spread . . . through droplets from the respiratory tract . . . through germs from excreta . . . (by way of) food or beverage contaminated by soiled hands or polluted water, through germs left by infected persons on objects such as food, cups, clothing, towels, etc., that come in direct contact with others; and by direct personal contact. Since healthy people carriers without symptoms of any ailment may harbor disease producing germs, it is never good practice to use any utensils or personal effects in common. Dr. Frank J. Jirka.

4. "Best practices are . . . required medical examinations . . . by school physicians, after illness and seasonally. All athletes except overweights should receive some protective or nutritive foods after each practice in each sport. Sanitary precautions should be followed with respect to buildings and equipment. . . . The persistence with which high school and college athletes cling to filthy articles of athletic wearing apparel seems . . . rather good evidence that our health teaching program in the high schools is a rather flat failure. Dr. Charles H. Keene.
5. "Best practices in athletics should be concerned with the mental and physical benefits of those who take part . . . guarding against overdoing . . . looking for tuberculosis in every candidate, examining the condition of the heart . . . not permitting over fatigue and staleness. Presence of signs of illness, or incomplete recovery from illness should disbar from all sports . . . (and) the participants and places of participation should be kept as clean as possible (for) there should be no transmission of disease in any form (permitted) as far as we know how to prevent it. We are all creatures of habit and continue undesirable practices until we are made to realize they are undesirable. Dr. J. R. Rogers.
6. "I am convinced that sports . . . offer one of the best opportunities available to influence the participants to form and practice wise physical, mental, and social health habits. . . . The dangers inherent in athletic programs are that they shall serve to emphasize vicious habits of somatic, mental, and social living . . . (because) of the drive of the desire to win, the urge of alumni, the pressures of clubs, and the needs of the school athletic budgets, all combine to make it easier to be athletically unclean, than to be sportsmanlike, ethical, and wholesome in behavior. Dr. Thomas A. Storey.

IV. *Conclusions.*

The study indicates specifically that in spite of the increased attention to public health, and the many developments in medical and sanitary knowledge, the average high school does not take the necessary precautions to maintain safe and healthful surroundings for its students, particularly in the gymnasia, showers, and locker rooms. Likewise, in the conduct of sports especially, practices which have been condemned for years as dangerous and lacking in

social approval, are still permitted to continue. This fact is even more astounding when the curricula of many of the same schools reveal courses designed to build attitudes and habits of good health! And finally, "the arresting feature of the report," according to Doctor Jirka, "is that unhygienic and insanitary practices are permitted . . . in spite of the opinion to the contrary among the administrators!" Truly, an educational paradox!

V. *Recommendations.*

Many splendid suggestions have already been listed in the sections devoted to comments by principals, and the statement by authorities in the medical profession. Specific goals to strive for are as follows:

1. Educate the community to an appreciation of the goals in health sought by the local high school, and a realization that achieving them depends materially on backing the school board in increased appropriations for more efficient janitor service, adequate facilities, and suitable personal equipment in athletics. (It must be recognized, however, that even as the situation now stands in most schools, many of the improvements named below are possible if the authorities consider them worthwhile).
2. Educate the janitor to an appreciation of the importance of his part in maintaining healthful and safe surroundings for the students, as well as a realization of the responsibilities this implies. (Daily cleaning of all floors, mats, toilets, and urinals using accepted cleaning agents should be considered the minimum).
3. Educate the student body to better health habits by precept and example, and particularly by the development of a real, "live" course in health education which will achieve the primary objective of inculcating those attitudes and ideals that tend to bring about desirable habits. (This should be one of the most worthwhile courses in the entire curriculum).
4. Provide safe, adequate, and healthful facilities in all parts of the athletic plant. (This implies smooth-finished, crackless floors, modern plumbing fixtures, proper ventilation, and adequate lighting).
5. Provide a comprehensive medical examination for all athletes by a competent physician before seasonal participation in athletics, and after illness or injury. (Ultimately this will be done annually for all students).
6. Eliminate all such filthy, dangerous, and socially condemned practices as the common use of clothing, drinking utensils, and bathing equipment, by providing individual sports outfits (adequately and frequently cleaned) wall fountains, or individual drinking containers (sterilized previous to use), towel service (clean individual towels at all times), suitable places for expectoration (kept in sanitary condition) and liquid soap in the showers.
7. Include definite provision for certain nutritive foods, as well as foods high in Vitamin C and D content, for those athletes who need it, and who do

not receive it at home. (Many parents do this for their children as a matter of course).

Mr. Principal, and Mr. Coach, you have checked the practices pertaining to health and sanitation in your school; studied the tables showing actual practices in many schools and compared them with your own situation; and now have read the list of specific recommendations for improving the situation. If sports and athletics are to be educational and desirable, and conducted with the best interests of the students at heart, here is a real challenge. What are you going to do about it?

* * * * *

Theory and Practice.— The department of physical education at the University of Illinois recently made a study of the practices of high school athletic teams with respect to hygiene and sanitation. Opinions of the principals as to whether or not prevailing practices incurred a danger to health were also obtained. The results indicate that the conception of principals of what should be the practice is far superior to that which prevails. The health histories of some of the teams indicate that undesirable practices not infrequently are followed by communicable ills.

Opinion was a little short of unanimous, for example, that towels, drinking cups, jerseys, sweat clothing and soap should not be used in common by team members. In spite of this opinion 177 schools where these undesirable practices prevail reported that 215 outbreaks of communicable ailments had occurred among teams during the last two years. The epidemics included 55 outbreaks of boils, 51 of colds, 24 of sore throat and 85 of athlete's foot (ring worm of feet). These experiences, especially the epidemics of boils, sore throat and ring worm, would appear to be convincing evidence that the common use of clothing and utensils carries with it a distinct hazard of ills that most people prefer to avoid.

The arresting feature of the report is that unhygienic and insanitary practices are permitted among those who participate in high school athletics in spite of opinion to the contrary among administrators. It would seem that in schools of all places, the primary principles of personal hygiene and sanitation should be employed and particularly among those who participate in athletics which come under the supervision of the school authorities.—*Illinois Health Messenger.*

* * * * *

Removal of Clothing.— Must so many schools continue to examine children without removal of clothing? If the public can change in its attitude toward "social diseases" "from the old time prudery to a frank and open consideration of syphilis," may not a re-appraisal and realignment of our ideas about education of parents of school children raise other questions as to how we can move forward.

MUSCLE INJURIES*

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This paper is limited to disorders of the muscular system following trauma. Disturbances of the muscle associated with injuries of other structures, such as bones or joints, are not discussed as it is thought they are better understood when described with the pathology influencing them.

Muscles may be injured by direct trauma or indirect violence. The direct trauma may be due to a blow or a laceration caused either by a sharp instrument or a projectile. Indirect injury is brought about by a contraction of the muscle under unusual circumstances. These accidents produce acute disturbances of muscle function. Chronic disturbances sometimes follow, due to the development of fibrosis or calcification within the muscle substance. Fibrosis results from the healing of muscular defects or the organization of blood, but the factors responsible for the production of calcification are not altogether understood.

Calcification occasionally takes place within a fibrotic area following uncomplicated muscle injury, but true myositis ossificans usually develops only following complicated injuries, particularly involving the joints. This condition is, therefore, not considered in this communication.

Following injury, muscle tissue undergoes three periods of change—exudation, absorption, and regeneration.

Although these are not sharply defined for practical purposes, the duration of the *first* period may be considered seventy-two hours; the *second,* two weeks; and the *third,* the interval between the end of the second and the return to normal or the maximum point of improvement. The first two periods vary according to the severity of the injury, and the second period also varies directly with the size of the swelling or mass.

Treatment consists of measures to reduce exudation, increase absorption, and restore normal function. Cold compresses are useful during the first period, and absolute rest is particularly important.

Heat, in the form of infrared radiation or diathermy, massage, and function promote absorption. Infrared radiation appears to produce better results in muscle injury, diathermy in hematoma formation, and an electric pad or hot water bag may be used to either supplement the other forms of heat or alone if the others are not available.

If toxemia is a factor, absorption of noxious substances in the muscle is accompanied by elimination and change of diet. Albee recommends a series of medicated colonic lavages. In tenacious cases these might be useful, but in the average case, strenuous and repeated saline catharsis will suffice. The diet is restricted to vegetables and fruits until all symptoms disappear. The

*New York State Journal of Medicine, Vol. 37, No. 4, February 15, 1937, page 378.

important point is the recognition of the toxic factor, as in many cases the results of treatment are gratifying and rapid.

Massage encourages absorption by spreading the mass, thereby increasing the surface susceptible to absorption and stimulating the flow of blood and the interchange of fluids. If, however, it be too vigorous, tender, recently injured cells may be damaged resulting in exudation instead of absorption. The guide is sensation. Massage of acute injuries should be soothing and should be kept below the intensity necessary to produce discomfort. Massage should never begin until two weeks after injury, and then gently.

If there be no rupture of muscle fibers, no mass or hematoma formation, function without resistance or strain upon the muscle injured is beneficial as the contractions promote the circulation of blood and therefore absorption. If masses are present, absolute rest should be insisted upon until healing has taken place around the area, making further hemorrhage impossible. Two weeks is usually required for this process and the clinical signs of its accomplishment are disappearance of heat, reduction of tenderness, and signs of stability.

The rehabilitation of muscle tissue is promoted by massage and exercise. This requires judgment in each case, the objectives being increasing intensity of both below the threshold at which discomfort is produced.

In the average case, three periods of treatment a week are sufficient, heat applications requiring twenty minutes and massage ten to fifteen minutes. It is probable that daily treatments will shorten the disability and reduce the degree of permanent changes following severe injuries.

In the case of minor muscle injuries with no tissue necrosis, treatment is not a necessity. It affords relief to the patient and shortens the duration of symptoms but the condition will be cured by natural processes regardless of treatment.

However, if serious muscle injury with accumulation of necrotic tissue or blood are allowed to continue without treatment, the chances of fibrosis with subsequent permanent stiffness are greatly increased.

The pathology of fatigued muscle is different and therefore the treatment required is different. The muscle cells have reduced vitality and reactivity, and need rest and food. This may be provided in a combination of rest of the organism and the application of heat and massage to stimulate the circulation of blood and interchange of fluids ordinarily produced by voluntary muscle contraction. When muscle tone begins to return, usually within two to four weeks, active motions should be started and gradually increased as the strength of the muscle increases.

* * * * *

Oculist?—How many parents know the difference between an oculist and an optometrist? And yet every school health program has for years followed up and advised parents regarding the care of defects of vision.

THE OPERATION OF SWIMMING POOLS AND BATHING BEACHES*

The benefits resulting from the use of swimming pools are largely defeated unless the pool is so constructed and maintained as to protect the bather from the transmission of certain infections. Experience has shown that conjunctivitis, pink eye, common colds, sinus infections, ringworm and other skin infections have been transmitted through the use of improperly operated swimming pools. Typhoid fever may be contracted through the use of bathing beaches located very near sewer outlets, but ordinarily this disease is not transmitted through the use of properly operated artificial swimming pools.

In general, it is found that swimming pools are chiefly of importance from the public health standpoint through the possibility of transmitting infection directly from one bather to another, and hence the methods of operating pools and treating the water must be based upon the necessity of destroying pathogenic bacteria as soon as they are introduced into the pool by the bathers. On the other hand, the original quality of the water at natural bathing beaches is of paramount importance, because of bathing load, which is the number of bathers per thousand gallons "fresh water," usually is not sufficient to result in serious local pollution of the water by the bathers, but the beaches may be exposed to serious pollution by sewage from municipal sewer systems. There are, however, many small lakes and ponds, used for bathing purposes and some popular beaches located near large cities, where little circulation and interchange of water occurs, and where bathing loads may be sufficient to result in the serious pollution of the water by the bathers. The problems of operating artificial swimming pools, small lakes and ponds, and beaches at the seashore, are quite distinct and will be discussed separately in this bulletin.

The constant and careful supervision of the patrons of swimming pools and bathing beaches is necessary to prevent the transmission of infection from bather to bather. The portion of Chapter VI of the Sanitary Code of the State of New York, governing the activities of the bathers, should be conspicuously posted and enforced. Posters for this purpose are available from the State Department of Health. Public bathing establishments should be under the direction of trained attendants who should make physical examination of the patrons of the pools in the dressing rooms, and patrons suffering from skin abrasions or eruptions, common colds, or other infections, or who have any other manifestation of sickness should be excluded. Special attention should be given to the inspection of the feet for ringworm infection. Detailed physical inspection of bathers is frequently difficult in public bathing establishments where private dressing rooms are utilized and where patrons can be inspected only after they have donned bathing suits. In general, one

*_The operation of Swimming Pools and Bathing Beaches,_ New York State Department of Health.

shower should be provided per 40 bathers patronizing pool or beach during the period of maximum attendance.

Bath houses at swimming pools and bathing beaches should be especially constructed to facilitate frequent and thorough scrubbing, and hence the floors and walls should be smooth and made of impervious material. The floors should have a slope of at least $\frac{1}{4}$-inch to the foot towards a drain to facilitate washing. Dressing rooms should be of simple design, and all furniture should be of plain material not damaged by frequent washing.

Bathing suits should be made of material easily laundered. Suits and towels must be thoroughly laundered before they are reused. These articles should be washed in hot water and soap, rinsed in clean water and then thoroughly dried before being used. A temperature of 175° F. or more is necessary to destroy the spores of the microscopic fungus causing ringworm infection, and hence laundering in lukewarm water is not satisfactory, unless a disinfectant be used in the rinsing water. Rinsing water should be heated to the same temperature as that used for washing to avoid shrinkage of wool suits. Laundry equipment designed especially for bathing establishments is available and its use facilitates the proper care of suits and towels.

The main toilet rooms, equipped with flush toilets and lavatories, should be located adjacent to dressing-rooms at bath houses, but they should not connect directly with the pool. Toilet facilities should be provided on the ratio of one for each 40 female bathers and one urinal and one toilet for each 60 male bathers. One lavatory should be provided for each 60 bathers.

The microscopic fungus causing ringworm infection of many persons who patronize swimming pools and gymnasiums is easily transmitted to those whose feet come in contact with the floors of dressing-rooms, hallways and diving boards. These spores become embedded in soft material, such as wood, rubber floor mats and pads on diving boards, and hence these articles should be thoroughly disinfected at daily intervals. Cloth mats when used on the end of spring boards should be replaced at frequent intervals. Some impervious, anti-slip material, however, is preferable for this purpose.

The floors of toilet rooms, dressing rooms and runways should be washed at daily intervals with soap or some washing compound. These surfaces should then be disinfected with a solution of sodium hypochlorite or calcium hypochlorite prepared as described below. A prepared mixture of a washing compound and sodium hypochlorite is available at most stores handling dairy equipment.

Sanitary paper slippers, which are discarded after being worn once, are frequently utilized at swimming pools to prevent feet from coming into direct contact with exposed surfaces. Individual rubber bathing slippers are also used for this purpose. These precautions are of value, but in addition the feet of bathers should be placed in a foot bath containing a solution which

will destroy the fungus causing ringworm before the organisms have become embedded in the skin and active infection occurs.

The foot baths containing running water, which should be used at beaches and outdoor pools to rinse the sand from the feet of bathers returning to the bath house, are not effective in the prevention of ringworm infection. Special foot baths, therefore, must be provided for this purpose, which contain a disinfectant or fungicide. Three types of special foot baths are in use. A shallow pool three or four feet square and about six inches deep may be constructed adjacent to the passageway from the dressing room to the pool, in which case the foot bath would be constructed of the same impervious material used for the runways of the pool. Occasionally, the floor of the passageway leading from the dressing-rooms to the pools contain a sunken portion in which the disinfectant is maintained, whereby it is necessary for those passing between the dressing rooms and pools to use the foot bath. Another type of foot bath is made of rubber, about three feet square and six inches deep, which may be placed at convenient points. They are constructed of relatively soft rubber to prevent injury to the feet. These rubber foot baths may be secured from firms manufacturing chlorine disinfectant.

Irrespective of the type of foot bath utilized, they should be so located that they will be convenient to the bathers utilizing the pool, otherwise their use, as required by the State Sanitary Code, will be difficult to enforce. The bathers should place the feet in the bath and should then dry the feet thoroughly, especially between the toes where the skin is tender and infection is most likely to occur. Medical treatment should be secured if symptoms of ringworm infection are observed, because the disinfecting solutions used in the foot baths are not effective in the cure of deep seated infections.

Sodium hypochlorite, or a solution of calcium hypochlorite, has been found to be an effective disinfectant in these special foot baths. The strength of the solution required is 0.5% or 5,000 parts per million available chlorine. Fortunately, this concentration of chlorine is not irritating to the skin. Following are directions for preparing solutions of this strength.

Commercial solutions of sodium hypochlorite usually contain about 3% available chlorine. The commercial solutions, therefore, should be diluted to one-sixth their strength by adding one part of solution to five parts of water to provide the 0.5% solution required for the foot bath. Proportional dilutions of commercial products of other strengths would be needed.

A solution of about 0.5% available chlorine may be secured by dissolving about $2\frac{1}{2}$ ounces of commercial chloride of lime, or one ounce of H.T.H. (high test hypochlorite) or Perchloron in each gallon of water needed to fill the foot bath.

These chlorine solutions lose their strength and should be replaced at least

twice per week, except when large numbers of people use the structure, in which case replacement is required after the baths have been used by about 400 bathers.

The air at indoor swimming pools becomes very warm and humid unless proper ventilating facilities are provided. Care should be taken, however, to prevent direct drafts on the bathers. The temperature of the air at indoor pools should be maintained at 70° to 75° F. and thermostatic control of the temperature is desirable. Indoor pools should be lighted by windows or skylights so that all portions of the pool may be observed. Adequate artificial lighting should be provided at pools used at night. Submerged lights around the edges of small artificial pools are desirable.

Persons who are not dressed for bathing should not be allowed on the walks and runways surrounding artificial pools, nor should bathers be allowed in places provided for spectators.

* * * * *

Credit Due Conference on College Hygiene.—Mr. Everett M. Sanders, author of the article on "The Health Education of Teachers in Training," appearing in the June issue of the Journal of School Health, wishes to express his regrets at his failure to give credit for considerable parts of the article to the *Proceedings of the Second National Conference on College Hygiene*. These Proceedings, then in mimeographed form, have since come off the press, and make an excellent report of the procedure and committee opinion of various aims and methods in this field of health.

* * * * *

Elementary School Track Meets.—The school advisory committees have considered the matter of competitive athletics in the elementary schools, particularly the question of inter-school track meets, and have reached the conclusion that such track meets should be discontinued in the Kansas City Elementary Schools.

We have the following objections to these contests:

First—They produce undue physical and nervous strains.

Second—The so-called weight classification causes some children to use harmful reducing methods in order to get into the low weight classes and children underweight are allowed to overtax themselves.

Third—There is inadequate medical supervision, allowing children convalescent from serious disease or even with serious disease to compete.

Fourth—The committees feel that the facilities available for holding these track meets are not the best for children.

Fifth—The committees feel that other forms of physical education are more suitable for children of this age.

The committees (made up of fifteen physicians) will gladly wait on the Board of Education to support these opinions.

THE MEDICAL PROBLEM OF FIRST AID*

ROBERT H. KENNEDY

I wish to call your attention to a few recognized first aid methods, as examples, about which some practitioners might know more with advantage. The Prone Pressure Method of artificial respiration was brought out by Sir Edward Sharpey Schäfer in 1903. A standard technique of applying it was approved in 1927 by the American Gas Association, American Red Cross, American Telephone and Telegraph Company, Bethlehem Steel Corporation, National Electric Light Association, National Safety Council, Bureau of Medicine and Surgery, Navy Department; office of the Surgeon General, War Department; U. S. Bureau of Mines; U. S. Bureau of Standards; and U. S. Public Health Service. It is recognized as the most efficient and safest method. Yet one still usually finds it side by side with the Sylvester method in many medical text-books. I would wager that more medical men who read this have made use of the Sylvester than the Schäfer method. Recently there has been added the Holgar-Nielson method from Denmark. Is there any reason why a layman should not ask your opinion of it? I was asked mine and had to admit that I had never heard of it. I looked it up and found that I had to depend on laymen to inform me about it. It should not be recommended.

You are fortunate if you have a text-book of surgery which tells you the modern treatment of snake bite. Yet if you have ever practiced in the country you have seen patients who have been, or more probably think they have been, bitten by a snake. A tourniquet to increase bleeding, a deep cross cut over the fang marks, but then, instead of the application of a caustic, as formerly, suction is continued for at least one-half hour with the mouth or a breast pump.

The treatment of sunstroke and heat exhaustion are entirely different. For us to treat both with cold water or ice may kill one of them. First aid men are well aware of this, but I did not get it out of medical school.

These are merely examples of methods of care which are better known frequently by the first aider than the doctor. The duty of the first-aider ends where the physician begins. It would be unfortunate if we arrived while these treatments were still under way and we were not sufficiently acquainted with them to continue. In 1934 drowning caused 7,326 deaths, poisonous gas 1,695, electric shock 723, snake bite 147, and excessive heat 3,250. There are plenty of lives to be saved by both the physician and the first-aider.

The tannic acid method of treating burns was introduced about 1925 by Davidson. Anyone who has had opportunity to use it gladly agrees that it has many advantages over any treatment previously used. A good result is

*Abstracted from *Bulletin* of the New York Academy of Medicine, February, 1937, pp. 61-83.

jeopardized if any kind of grease or ointment is applied first. The American Red Cross in the 1933 edition of its Text-Book was already recommending tannic acid in first aid and explaining the folly of greases.

A bone may be broken in an accident and no displacement of the fragments occur. Suppose a person is allowed to bear weight on such an injured leg or to be moved without the proper splinting, displacement of bone fragments may occur and any of the unfortunate results mentioned above may follow. Not infrequently a closed fracture will become compound, making the result as to life, limb and permanent disability much more serious than if the fracture had remained closed.

All of these occurrences can be prevented if sufficient pull is applied to the part to overcome the muscular contraction and thus to preserve the original length of the bone. This is easy if applied immediately after injury before the muscles have had an opportunity to become fixed in spasm. Early reduction is facilitated and the length of disability in such cases is decreased. Late reductions are lamentable and difficult and are often followed by long disability.

Principles of Initial Care:

1. If suspicious that a fracture is present, render care as a fracture.
2. Combat any shock.
3. Avoid all unnecessary handling.
4. Protect any existing wound by the best means available.
5. Splint effectively, wherever found, before transporting.
6. Transport carefully.

The injured person should first be examined rapidly and gently to determine whether he is seriously hurt. The clothing does not need to be removed. In examining an injured person keep him thoroughly covered except the part actually being examined. One should depend on local pain, loss of function, deformity and malposition of the limb for the emergency diagnosis of fracture and should not try to obtain crepitus or false point of motion. If the patient thinks that he felt a bone "snap," for emergency purposes, we should be satisfied with his history and not attempt to prove the diagnosis on the street.

The saving of life comes first, the saving of limb second. If the patient is in severe shock this demands treatment before anything is done for the injured limb. There is no use in splinting a limb carefully while neglecting to treat shock from which the patient may be dying. On the other hand traction on an extremity may be an effective means of combating shock. If a physician is present morphine is the best treatment for shock. Sufficient morphine should be given to relieve pain and thereby quiet the patient's restlessness. The body heat must be maintained by sufficient extra covering and the use of external heat.

If a wound is suspected, the seams of the clothing are split to expose the

region. If a wound is found, which may possibly connect with a fracture, it should not be washed out. Fresh mild tincture of iodine, if available, may be applied to the surrounding skin and projecting bone. This should not be applied to exposed soft parts, unless of small extent, since it causes pain. A sterile compress should then be placed over the wound. Bleeding should be stopped. It is rare that this cannot be done with a firm compression bandage.

Tourniquets should not be used until compression of the wound has proved of no avail. Deaths have been caused by an improperly applied tourniquet which allows some arterial blood to enter the part and only shuts off the venous return. It is common to see all bleeding stop as soon as a tourniquet is removed.

If a tourniquet must be used it should be loosened every half hour to allow blood to return to the part distal to the tourniquet. If a tourniquet is applied too tightly or for too long a period gangrene, paralysis from nerve pressure, or lowered resistance to infection may result.

Do not attempt to replace the fragments in a compound fracture with projecting bone. If the bone disappears beneath the skin in the course of the application of traction, this should not cause anxiety. The patient must be operated on in any case to clean the wound. It is important to have word accompany the patient that the bone has been exposed in order to guide the physician treating the patient. Traction is more necessary in compound than in closed fractures, to lessen the danger of spreading contamination in the soft parts and to diminish the greater shock.

The patient should not be picked up hastily and dumped into the first automobile and rushed to a doctor's office or hospital. It is far better to cover him adequately and let him lie on the ground where he was found, until splints can be put on, and then move him in an ambulance. If it is necessary to change his position at all before splinting, in the instance of an extremity fracture, a continuous pull should be exerted by hand on the injured part while he is being moved.

If the mechanism of injury is such that a fracture of the spine might have been produced, transport as a fracture, even though no objective signs are made out in a cursory examination. Death or permanent disability result more commonly from improper transportation of fracture of the spine, sometimes unrecognized, than from any other injury. Pinching the skin and trying slight active motions of the extremities from below upward will determine rapidly whether or not there is marked cord injury.

In patients with possible fractures of the dorsal or lumbar regions the underlying principle of hyperextension should be observed in any moving and in transferring them from the site of the accident. If found in any other position, the patient should be slowly and evenly rolled onto his face, with a sheet or blanket beneath him if one is available. If neither of these is

handy and two other persons only are present the patient may be moved to the splint with one person lifting the shoulders and the other the thighs, the body being in the face down position. With sheet or blanket available the injured person is carried to the splint in the prone position in the improvised hammock with one person holding the sheet at either end. If three to six competently trained men are present the patient may be lifted with the entire body kept in a straight line without any twisting and placed downward on the splint. Misdirected attempts to help may cause further damage.

The ideal position for transportation in possible fractures of the dorsal and lumbar regions is face downward on a rigid support. Ordinary stretchers do not answer the purpose, but only those in which the side bars are held rigidly apart. In the absence of this, a wide board or a door may be used. The so-called "ladder" splint is the simplest and most effective. It consists of two long boards fastened together by three cross pieces, either nailed or tied on. Each board is padded with a blanket or other material. The patient should be carefully tied in position so that jolts will not cause any movement. If paralysis is thought to be present all wrinkles in the clothing and hard objects in the pockets should be removed to prevent the patient lying on them with the probability of developing pressure sores later.

In possible fractures of the cervical vertebrae the head and trunk should be kept in the same position as found during movement to the rigid stretcher, etc. In addition to the usual body ties, rigid support, such as bags of sand should be placed either side of the head to prevent rotation.

* * * * *

To Reward or Not to Reward.—PROGRESSIVE EDUCATION (notice the capitals) looks with pronounced disfavor upon prizes. Most of us in public school work, however, have inherited situations which compel continuance of certain established prizes whether we like it or not. And anyway I wonder sometimes if P.E. may not be off on the wrong foot in this regard. We try to make school more a real world and less an artificial world, and what do we find in the real world? Great interest, certainly, in the Nobel prize, the Pulitzer prizes, the Newberry prize, the Bok awards, and many others designed to reward good work and stimulate more of it. We applaud the National Speech Arts Fellowship for handing a gold medal to Helen Hayes, some other organization for similarly honoring Ina Claire, and still another for giving the best radio announcer of the year a bit of coveted laurel. The state itself dangles "scholarships" before the eyes of best students in each Assembly District and the whole Civil Service System is essentially a system of conducting competitions with jobs as prizes. Much of normal existence is a valiant struggle for some sort of prize, sometimes winning, many times losing. To know how to win without arrogance and to lose without discouragement, this is something no school need be ashamed to teach.—*New York State Educator,* April, 1937, page 544.

PROPOSED CONSTITUTION AND BY-LAWS AMERICAN SCHOOL HEALTH ASSOCIATION

JOHN SUNDWALL, PH. D., M. D.,
President of the American Association of School Physicians

For a number of years, the American Association of School Physicians has realized that the health-medical sciences professions, in general, have much to contribute and should take an active part in the school's health program. A comprehensive and constructive school health program including both the teaching and practice of health must include the special services not only of the physician but those of the dentist, nurse, nutritionist, public health workers in several fields of public health, and others who have had substantial education and training in those basic sciences which acquaint one with the human body, its structure, functions, protection and care.

With a view of bringing into effect a national organization which will include memberships from each of the health-medical sciences professions now participating in school health programs or who anticipate school health work as careers, the following constitution and by-laws of the proposed American School Health Association are submitted to the members of the American Association of School Physicians for consideration and adoption at its forthcoming annual meeting to be held at the Hotel Pennsylvania, New York City, in conjunction with the annual meeting of the American Public Health Association, October 5 to 8, 1937.

Copies of this proposed constitution and by-laws were submitted to a consulting group composed of former and present officers of the American Association of School Physicians and of members who have taken an active part in the affairs of the Association. Twenty-four members of the consulting group have expressed themselves as in favor of the changes that will be brought about as a result of the adoption of the proposed constitution and by-laws. Only one objected.

The Committee on Constitution and By-Laws has given much study to this matter and is unanimous in its recommendation that the following Constitution and By-Laws be adopted by the American Association of School Physicians.

AMERICAN SCHOOL HEALTH ASSOCIATION

CONSTITUTION AND BY-LAWS

Constitution

Article I. *Name:* The name of this Association incorporated under the laws of the state of ..... is the American School Health Association.

Article II. *Membership:* The membership of this Association shall consist of members of the health-sciences professions engaged or interested in school health work and who meet the eligibility requirements as specified in the By-Laws of the Association.

Article III. *Object:* The object of this Association is: To promote comprehensive and constructive school health programs including the teaching of health, health services, and healthful school living.

Article IV. *Governing Council:* There shall be a Governing Council consisting of:

1. The officers of the Association.
2. Fifteen members elected from the membership of the Association, each to serve for 3 years (except that at the 1st election held under this Constitution 5 members shall be elected for 3 years, 5 for 2 years, 5 for 1 year) the term of each councilor shall begin at the end of the annual meeting at which the councilor is elected. After two consecutive 3 year terms, a councilor shall be ineligible for reelection to the council during one Association year.
3. One representative from each of the Sections, as these are established by the Governing Council, shall hold office for one year, and be elected from the membership of the Section he represents.

Article V. *Officers:* The officers of this Association shall be a President, President-Elect, two Vice-presidents, an Executive Secretary and Treasurer, and the Editor of the official publication of the Association. The officers of the Association shall be elected annually by written ballot by the Governing Council. The terms of office shall be for 1 year. The term of office of each officer shall begin at the end of the next annual meeting. The officers of the Association shall be the officers of the Governing Council and the President shall be Chairman of the Governing Council and the Executive Committee. The President-Elect shall automatically become President at the expiration of the term of the President. A majority vote of the Councilors voting shall be required to elect officers. A quorum of the Council shall consist of at least seven members.

Article VI. *Functions of the Governing Council:* The Governing Council shall be the executive body of this Association, and shall be invested with the duties and authority to:

1. Establish policies for the Association.
2. Establish Sections and Committees of the Association.
3. Submit to the vote of the Association all resolutions which have been approved by the Council.
4. Establish qualifications for affiliated Societies, Fellows, and Honorary Fellows.
5. Determine and allocate the annual budget of the Association, and provide procedures for raising funds for the Association.
6. Publish abstracts of the minutes of each meeting, and all publications of the Association.
7. Study and recommend procedures for the promotion and maintenance of comprehensive and constructive school health programs, and establish a school health service bureau.

8. Effectively carry on all the affairs of this Association.

Article VII. *Amendments:* The Constitution may be amended by a two-thirds vote of the members of the Association present and voting at the annual meeting, provided that the specific amendment has the approval of the Governing Council and has been published in the official publication of the Association at least one month prior to meeting.

By-Laws

Article I. *Membership and Dues:*

A. The following health sciences professions engaged or interested in school health work are eligible to active membership in the Association: Physicians, Dentists, Nurses, Nutritionists, Public Health Workers, and others engaged in school health work whose professional education includes substantial training in those sciences which acquaint one with the structure, functions, and care of the human body. Candidates for membership shall be sponsored by two members, and shall be approved by the Committee on Membership and Fellowships of the Association. Members shall be elected by the Governing Council. The annual dues shall be $2.00.

1. *Fellows:* Members of the Association of five or more years of active standing, who have reached the age of 30 years, who have attained academic or professional degrees in the health sciences, who have been engaged in school health work for a period of five years and who have given evidence of special proficiency in school health work, shall be eligible for election as Fellows of the Association. Fellows shall be elected by the Governing Council. The annual dues of Fellows shall be $5.00.
2. *Honorary Fellows:* Honorary Fellows may be elected by the Governing Council for long and distinguished service in school health work. Honorary Fellowships shall not include payment of dues.
3. *School Membership:* A school district or school unit may be elected to membership with a view of receiving the publications of the Association and the advice and guidance of the Association's School Health Service Bureau in helping it to initiate and organize its school health program. The annual dues shall be $10.00.
4. *Sustaining Members:* Individuals or corporations interested in the promotion of school health work may be elected to Sustaining Memberships. Annual dues $25.00 or more.
5. *Affiliated Societies:* A State or Provincial school health association composed of members who meet the requirements for membership in the American School Health Association may be elected as an Affiliated Society providing that at least one-half of its active members are members of the American School Health Association. The annual dues shall be $10.00.

6. *Life Members:* Upon the recommendation of the Committee on Memberships and Fellowships, the Governing Council may elect any member of the Association to Life Membership. The dues for Life Members shall be $50.00 payable within one year after election, and this payment by any such member shall exempt him from any further dues.
7. *Dues and Privileges:* The annual payment of all dues shall be in advance. Members and all constituents paying dues shall be entitled to secure the *Journal of School Health* and such other publications and services as may be designated by the Governing Council.

Article II. *Publications:* The official publication of the American School Health Association shall be *The Journal of School Health.* The Association shall publish and distribute reports of committees and such other contributions to school health work as it deems advisable and within its means.

Article III. *Sections:* Sections made up of members interested in special phases of school health work may be constituted by the Governing Council. Section officers shall be composed of a chairman, vice-chairman, secretary and a member of the Governing Council to be selected by the Section. The term of office for officers of the Section shall be one year.

Article IV. *Committees:* There shall be five standing committees of the Association as follows:

1. Committee on Membership and Fellowships.
2. Committee on Meetings and Publications.
3. Committee on Professional Education.
4. Committee on Methods and Materials in Health Instruction.
5. Committee on School Health Service Practices.

Each standing committee shall consist of five members and be appointed by the Governing Council. The terms of office shall be for five years, provided that the first members of the committees appointed shall hold office from one to five years as follows: one member, one year; one member, two years; one member, three years; one member, four years; and one member for five years. The Executive Secretay shall be an ex-officio member of each standing committee.

Article V. *Executive Committee:* An Executive Committee, consisting of the President, President-Elect, Executive Secretary and Treasurer, and Editor, shall carry out the policies of the Governing Council between the meetings of the Governing Council.

Article VI. *Meetings of the Association:* There shall be at least one meeting of the Association annually, held at a place selected by the Governing Council. Special and Regional meetings may be called by the Council. All papers presented at these meetings shall be the property of the Association for publications unless the right is waived by the Governing Council.

Article VII. *Finances:* All moneys of the Association shall be deposited to the account of the Executive Secretary and Treasurer. He shall be cus-

todian of the Association and shall disburse funds in accordance with duly authorized vouchers. The Executive Secretary and Treasurer shall be bonded at the expense of the Association. The books of the Association shall be audited annually by certified public accountants, to be appointed by the Governing Council.

Article VIII. *Amendments:* These By-Laws may be amended by a two-thirds vote of those voting on the Governing Council provided that twenty-four hours prior, written notice thereof has been given.

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Program — Annual Meeting
AMERICAN ASSOCIATION OF SCHOOL PHYSICIANS
Hotel Pennsylvania, New York City
October 3rd to 8th, 1937

FIRST SESSION: *Symposium.*

Sunday, October 3, 8:00 p. m., Room ....., Hotel Pennsylvania

THE CONTRIBUTIONS OF THE HEALTH SCIENCE PROFESSIONS TO THE SCHOOL HEALTH PROGRAM

1. *The Physician—*
   DR. J. H. J. UPHAM, President of the American Medical Association
2. *The Dentist—*
   DR. C. WILLARD CAMALIER, President of the American Dental Association.
3. *The Nurse—*
   MISS AMELIA GRANT, President of the National Organization for Public Health Nursing.
4. *Mental Hygienist—*
   CHARLES MACFIE CAMPBELL, M. D., President of the American Psychiatric Association
5. *Nutrition—*
   MISS LUTE TROUTT, President of the American Dietetic Association

SECOND SESSION: *Business Meeting*

Monday, October 4, 9:30 a. m., Room ....., Hotel Pennsylvania,

1. *Professional Education and Qualifications for the Administration of School Health Programs—*
   JOHN SUNDWALL, Ph. D., M. D., President of the American Association of School Physicians
2. *Reading of the Minutes—*
   (Previous annual meeting and mid-winter meeting at Washington)
3. *Presentation and Adoption of the Proposed Constitution and By-Laws of the American School Health Association*
4. *Election of Members*
5. *Formation of the Governing Council*

THIRD SESSION: *Business Meeting, Governing Council*

Monday, October 4th, Room ....., Hotel Pennsylvania

1. *Election of Officers*
2. *Appointment of Committees*
   - A. *Standing Committees*
     1. Membership and Fellowship
     2. Meeting and Publications
     3. Professional Education
     4. Methods and Materials in Health Teaching
     5. School Health Practices
   - B. *Special Committees*
     1. Tuberculosis
     2. Other committees

FOURTH SESSION: *Luncheon, American Association of School Physicians, Committee on Tuberculosis*

Thursday, October 7th, Room ....., Hotel Pennsylvania

Chairman, DR. J. A. MYERS, President, National Tuberculosis Assn.

1. *Report of Committee on Tuberculosis*—
   DR. J. A. MYERS
2. *Some X-Ray Demonstrations of Tuberculosis*—
   DR. CARL BOETTIGER, President of the Queensboro Tuberculosis and Health Association
3. *Tuberculosis Work in the Newton Schools*—
   DR. HAROLD CHOPE, Director, Department of Public Health, Newton, Massachusetts

FIFTH SESSION: *Joint Meetings*

Friday, October 8th, 2:30 p. m., Banquet Room, Hotel Pennsylvania

CHILD HYGIENE SECTION, PUBLIC HEALTH NURSES, AND AMERICAN ASSOCIATION OF SCHOOL PHYSICIANS

1. *Practical Procedures in School Health Service*—
   DOROTHY B. NYSWANDER, Ph.D.
2. *The Extent of Seasonal Variation of Intermittency in Growth*—
   CLAIR E. TURNER, Dr. P. H.
3. *Health Knowledge of School Children with Reference to Health Education*—
   MAX SCHAM, M. D.

* * * * *

"If we have reverence for childhood, our first specific rule is to make sure of a healthy bodily development."—JOHN DEWEY

EDITORIALS

"Mens sana in sano corpore."

Juvenal has given this motto, which we use often in arguments for health services, health teaching, physical education, and better sanitation. Various studies indicate that ofttimes we fail to apply theory to practice.

* * * * *

On pages 151 to 166 of this issue will be found articles dealing with practices in athletics that have a bearing, often insanitary and dangerous, on the health of participants.

Absolute ignoring by coaches and by school administrators of the health, physical protection, and health education of competitors in athletics seems a characteristic of athletic practices in a considerable proportion of our secondary schools. While conditions in the colleges are probably somewhat better, observation at that level shows many unhealthful practices to be permitted commonly.

Among the 522 high schools reporting in an Illinois survey, only slightly more than half (52%) require a medical (physical) examination as a prerequisite to participation in athletics, only 13% attempt to supplement the diet of interscholastic athletes, only 23% furnish their athletes with clean towels for each practice session.

The conditions in the state in which the study was made are probably no worse than those in other states, and undoubtedly, now that attention is called to them, great improvement will be made.

The opinions of the high school principals should have peculiar interest for the health officers in their communities. To 21% of them it seems permissable to exchange practice jerseys, to 18%, to exchange sweat clothing, to 15%, to share a common water bottle (although the use of a common drinking cup is forbidden by law). To 13%, to share a common towel or sponge does not seem reprehensible. Four principals gave the opinion that spitting on the floor by players is permissible. Such a practice is forbidden by law in practically all states. In the state in which the study was made, tests on 41,750 children show 29.2 percent of them to be positive reactors to tuberculin. Yet, in the opinion of these "educators" it is permissible to spit on the floor.

If the coaches, physical educators, and school administrators are too ignorant or too careless regarding even elementary health protection to bring about a correction of these dangerous pactices, it is high time that school physicians, the medical profession, and health departments step into the situation and, if persuasion fails, compel more sanitary practices.

Interscholastic athletics are a part of the school program for which school administrators should be held responsible. If it is not a part of the school program, it should not be countenanced nor permitted, and certainly public

moneys should not be used for any part of its support, either as to supplies or equipment, or plant.

In a school or school system having a department of "health education" or "physical education," to permit to go on the bad practices discussed in these articles is to stultify the whole health program, and—yes—the whole educational program.

* * * * *

Injuries in athletics are inevitable. School authorities, however, should spare no effort to reduce them to the minimum, both as to number and as to severity.

Intensive studies of accident occurrence, both in colleges and in secondary schools, indicate clearly certain faulty and careless procedures that greatly increase the jeopardy of sports.

In football, the great majority of accidents occur during the early fortnight of the season. This is due to three preventable causes: lack of proper seasoning or conditioning of candidates before participation in tackling, blocking, or scrimmage; poor or inadequate protection of parts likely to be bruised or injured; the pitting of young, inexperienced players (particularly in the secondary schools) against older, larger, and more mature boys.

Athletic sports have great value, if properly taught and supervised. For the protection of players, the coach must be well trained and have a standard of ethics that causes him to put the welfare of the boy above the winning of the game. Medical supervision must be ever present, both at practice and during the games. This supervision must include careful physical examinations before the season, and repeatedly during it. No injured player should be allowed to return to competition without the consent of the physician. Injuries should have immediate medical and surgical care by physicians *on the field*. This care should be continued until recovery is as near complete as possible, and should be as expert as the medical and hospital facilities of the community permit. A part of the physician's duty should be to insist that all players have and wear proper protective clothing and devices.

If schools foster, or even permit, athletic competition, the school authorities and budget are responsible for prevention, and for care by experts.

* * * * *

The Sixty-Sixth Annual Meeting of the American Public Health Association will be held at the Hotel Pennsylvania, New York City, October 5-8, 1937. Its program is replete with timely discussions which are of great interest to school health workers. From the preliminary program of the American Public Health Association, we have selected the following:

Child Hygiene Section

Tuesday, October 5th, 9:30 a. m., Roof Garden, Hotel Pennsylvania

1. *Some Observations on the Use of Tests for Vitamine "A" Deficiencies*—Carrol E. Palmer, Ph. D., M. D.

2. *Heart Disease in Childhood*—
T. Ducket Jones, M. D.
3. *Tuberculosis Among Children in Cattaraugus County, New York*—
J. H. Korns, M. D.
4. *State-wide Program of Oral Health*—
Howard B. Mettel and Mary H. Westfall, D. D. S.

Wednesday, October 6th, 9:30 a. m., Southeast Ball Room, Hotel Pennsylvania

1. *Mental Hygiene*—
Speaker to be Selected
2. *Some Suggestions for a More Effective School Health Program*—
John T. Phair, M. D., Dr. P. H.

Thursday, October 7, 9:30 a. m.

Joint Session of the Child Hygiene Section and Public Health Nurses on Development of the Federal Program for the Crippled Child

1. *Development of Federal Program for the Care of Crippled Children*—
Robert C. Wood, M. D.
2. *Preventive Aspects of Crippling Diseases*—
H. E. Hilleboe, M. D.
3. *The Public Health Nurse and Orthopedic Nursing*—
Dorothy J. Carter, R. N.
4. *Social Work and the Handicapped Child*—
Dorothy Buckner
5. *Education of the Handicapped Child*—
Bronson Crothers, M. D.

Food and Nutrition

Thursday, October 7th, 9:30 a. m., Parlor II, Hotel Pennsylvania

1. *What Do We Know About Nutritional Dental Caries*—
Bion R. East, D. D. S.
2. *Nutritional Influences on Teeth*—
Frances Krasnow, Ph. D.

Public Health Education Section

Tuesday, October 5th, 1937, 2:30 p. m., Ball Room, Hotel New Yorker

1. *Health Education Exhibits*—
E. G. Routzahn
2. *Evaluation of Public Health Education Methods*—
Bertrand Brown
3. *Why Health Education*—
Panel Discussion, W. Frank Walker, Leader

Epidemiology Section

Wednesday, October 6th, 9:30 a. m., Roof Garden, Hotel Pennsylvania

1. *Present Status of Scarlet Fever Prevention*—
G. W. Anderson, M. D.

2. *Experience in Scarlet Fever Control*—
   E. R. KRUMBIEGEL, M. D.
3. *Scarlet Fever Immunization*—
   E. H. PLACE, M. D., GEORGE B. SANBORN, M. D.
4. *Prophylactic Use of Convalescent Serum in Scarlet Fever*—
   MAURICE HARDGREVE, M. D.

Friday, October 8th, 9:30 a. m., Winter Garden, Hotel McAlpine

1. *Measles*—
   FRANKLIN H. TOP, M. D.

ABSTRACTS

Medical Supervision of Athletics.*—A surgeon (Dr. J. S. Klumpp) is *Council Sponsor for the Medical Supervision of School Boy Athletes.* In the City of Huntington, a surgeon and an internist provide, beside the initial physical examination, appropriate supervision at all practice and playing periods. In each of two smaller towns in the county, a physician provides similar health supervision. Friends of the osteopathic physicians, who had been doing what little previously had been done along this line, resented this intrusion of the medical profession. Strangely enough, the majority of the members of the Athletic Association and the athletic director, the managers, and the coach were actively antagonistic to it. They could not appreciate the value of health protection in athletics. Only curative procedures were to them worthy of attention. (Such attitudes are encountered all too frequently in coaches and athletic directors.) The only services provided in this phase of the program are for "health protection." No treatment beyond essential first aid is given. The Athletic Association is composed of representatives of the lay public, the school athletic department, and a single member from the Board of Education. (Two members of the Cabell County Board of Education had brilliant careers in athletics while in college. Because of their own appreciation of common athletic practices, they were particularly impressed with the need for medical supervision of school boy athletes as a health protection measure.) In West Virginia, interscholastic athletics are under the control of local athletic associations, and are, therefore, not under legal supervision or responsibility of the Board of Education. The State Board of Education has ruled that participation in athletics is individually elective and not an essential part of free school education. Because of this ruling, state funds cannot be used by the Board of Education to pay for the care of an injured athlete. The Board of Education of Cabell County feels that it has some moral responsibility beyond this, however, and they are willing to see to it that these boys who are permitted to indulge in even an elective activity may do so only when physically fit. The Council hopes eventually to have the financial compensation for the Medical Supervisors of School Boy Athletes, taken from the gate receipts instead of from the Board of Education's Maintenance Fund. All injuries are cared for by physicians

*A Plan for Medical Participation in a School Health Program. Advisory Health Council, Board of Education, Cabell County, Huntington, W. Va.

selected by the boy's family or by the local athletic association. This has no connection whatsoever with the part of supervision included in this program.

Results: A total of 152 boys were examined for football and basketball. Of these 26 were found unfit for athletic competition. Of these 14 were rejected because of either albumen or sugar in the urine, 3 for hernia, nine for heart conditions, and one case of postural albuminuria was permitted to return to practice. At other times other players were temporarily removed from practice and play because of temporary incapacity, acute infections, etc.

* * * * *

Athletic Heart.—In his conclusions and suggestions Wilce* says:

1. Some hearts with inferiority factors are now being enlarged pathologically and their inferiority factor increased through participation in sport as now organized and conducted in the United States.

2. An occasional heart without inferiority factor, as now understood, will enlarge under conditions of participation in heavy sports in America. These hearts are definitely mostly athletic or work hearts.

3. In most instances, this increase in size will disappear, in the absence of previous inferiority factor, under conditions of rest, without leaving practical pathological clinical influence.

4. The reason for this varying "physiological enlargement" in occasional hearts will, in my belief, eventually be found to be due to some inherited germ plasm, endocrine, nervous, or bio-chemical factor, at present not fully understood.

5. The great majority of so-called normal hearts, when well-trained, show no change under the heaviest sport.

6. Some hearts with certain past disease history, supposed to predispose to easier pathological cardiac development show no pathologic enlargement after heavy sports experience. In many such cases, proper degree of activity is clinically beneficial, instead of detrimental to the best interests of the heart and the entire organism.

7. Inadequate recognition is given the condition known as potential heart disease in some cases involving the question of participation in athletics. The question of what constitutes an inferiority factor of degree which is a danger in future athletic participation is not settled.

8. The tremendous variation in so-called normal hearts should be subject of continuous study in various age groups.

9. The fact that opportunity for specialized cardiac examinations with instruments of precision is practically available to a minority only, handicaps rapid progress in this field of investigation.

10. Because of the willingness to say, "There is nothing in this athletic heart business, your heart's all right," other conditions which are criteria of the degree of activity individuals should indulge are many times overlooked in sports examinations. I have in mind such conditions as silent pericarditis,

or silent endocarditis, varying degrees of mediastinal distortion, small degrees of pleuro pericarditis, tuberculosis, and others.

11. I suggest that, while the term "athletic heart" is in a sense "unfortunate, misleading, and a misnomer," that it might well be maintained and combined for health education purpose with the true diagnosis of the heart condition. This seems fair, in cases where sports participation has contributed to the degree of abnormal cardiac condition present. Such a conception might bring into our terminology such terms as rheumatic athletic heart, athletic hypertensive heart, pulmonary athletic heart, anoxemic athletic dilation, probably transitory athletic enlargement, etc.

12. In my mind, a fine public health contribution, in the field of the influence of sport on the heart can be made by a closely co-ordinated program of student health services with college, high school, and other physical education administrators. Interest of medical, health and educational organization officials and physicians in full co-operation is necessary.

13. Scientific investigations made in the United States, in the field of the influence of sport on the heart, are not conclusive but are very interesting and suggestive.

I have studied the field for 34 years in varying personal and "educationally professional" capacities. My feeling is that science cannot generalize accurately on evidence of results in any one given sport.

Tremendous variation exists in competitor types, ages, nationality, intensity, training, coaching personalities and methods. Climate, temperature, elevation, diet, personal habits, inferiority or superiority factors all enter the picture.

We still have a broad and fertile field for properly conducted and followed up investigation of the influences of American sports on the heart.—*"Athletic Heart—Modern Conceptions and a Recent Investigation," J. W. Wilce, M. D., *The Journal-Lancet,* November, 1936, p. 563.

NOTES

Resignation.—Francis E. Harrington, M. D., for the past seventeen years Director of Hygiene in the public schools of Minneapolis, Minnesota, has resigned from that position. Dr. Harrington retains his position as Commissioner of Health of Minneapolis. Recently, Dr. Harrington was put in charge of the City Hospital. This, added to his duties of Health Commissioner, made it impossible for him to continue his work as Director of Hygiene in the public schools. The schools have lost the services of an able executive and an expert in school health activities. Dr. Harrington is a member of the Executive Committee of the American Association of School Physicians.

MEETINGS

American Association of School Physicians, and American Public Health Association, October 3 to 8, 1937, Hotel Pennsylvania, New York City.

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National Association of Nursery Education, October 20-23, 1937, Nashville, Tenn.

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